

# New York State Department of Transportation

## Yellow Flag NB2258W016

By: Alex Abreu

Flag Date: September 29, 2022

Superseding Information:

No Flags Superseded

### Structure Information

**BIN: 1065318**

**Feature Carried: 278I278IX2M23027**

**Feature Crossed: 6TH AVENUE**

**Orientation: 8 - NORTHWEST**

**Region: 11 - NEW YORK CITY**

**County: KINGS**

**Political Unit: City of NEW YORK**

**Approximate Year Built: 1962**

**Posted Load Matches Inventory : Yes**

**Bridge Load Posting (Tons) : Not Posted for Load**

**Primary Owner: New York State Department of Transportation**

**Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party**

**Typical or Main Span Type: 3 - Steel, 02 - Stringer/Multi-Beam or Girder**

**This Bridge is not a Ramp**

**Number of Spans: 322**

### Verbal Notification Information

**Person Notified: Heinz Joachim, P.E.**

**Date: September 29, 2022 1:00:00 PM**

**Of: NYSDOT Region 11**

### Signature Information

**Signature: Alex Abreu, P.E. 099761-1**

**Date: October 02, 2022**

**Reviewed By: Robert Kemp**

**Date: October 03, 2022**

**Attachments: 10**

### Flagged Elements

Parent Element	Element	Total Quantity	Unit
<b>Span Number : 50</b>			
	113 - Steel Stringer	49	ft

### Flagged Condition Description

This Yellow Flag No. NB2258W016 is NEW.

Location: Span 50, Stringer S1 at Pier 49 above 3rd Avenue EB Service Road between 61st to 62nd Street.

**Description:**

The end of Stringer S1 in Span 50 at Pier 49 exhibits section loss for the full web height for 4" wide along the connection angles with remaining thickness measured (RTM) ranging from 0.13" to 0.29" resulting in approximately maximum 68% section loss (Photos 5 and 8). The upper stringer web at the top cope exhibits 4"L x 2"H corrosion hole (Photo 7). The lower stringer web adjacent to the connection angle exhibits two corrosion holes for 1/2" diameter and 1" diameter (Photo 6). The overall shear web area section loss is approximately 58% for this segmental stringer. (refer to Yellow Flag Condition Sketch Photo 2 for more details)

Additionally, the edge of the bottom flange exhibits 25% section loss to the left side for 18"L x 2"W (Photo 8). Also, both connection angles exhibit no significant defects.

This portion of Stringer S1 is approximately 16ft long from Pier 49 to Transfer Beam #1 (TB1). Stringer S1 at the connection to TB1 exhibits section loss for the full web height for 3" wide along the connection angles for up to 1/16" deep at the left face and 1/8" deep at the right face with 2" diameter corrosion hole in the upper web at the top cope (Photo 9). Both connection angles at TB1 exhibit no significant defects.

This is a newly flagged condition.

**Notes:**

1. Adjacent Girder G6 exhibits up to 20% section loss for the full web height for up to 3" wide along the connection angles.
2. The top of deck above the flagged location exhibits no significant defects (Photo 10). The underside of the deck at the left side of the stringer exhibits minor corrosion to the SIP forms for 1SF total.
3. The distance from the right fascia steel plate to the edge of the roadway is approximately 26" and from the right fascia steel plate to the right face of the Stringer S1 web is approximately 25".
4. A single lane closure on 3rd Avenue EB Service road between 61st to 62nd street and 30ft bucket truck are required to access this location.
5. The previous 2021 Biennial Report documented the above stringer location as CS3 with the following condition state note:  
Stringer S1 exhibits a corrosion hole measuring 1-1/2"H x 3"L at the upper web.

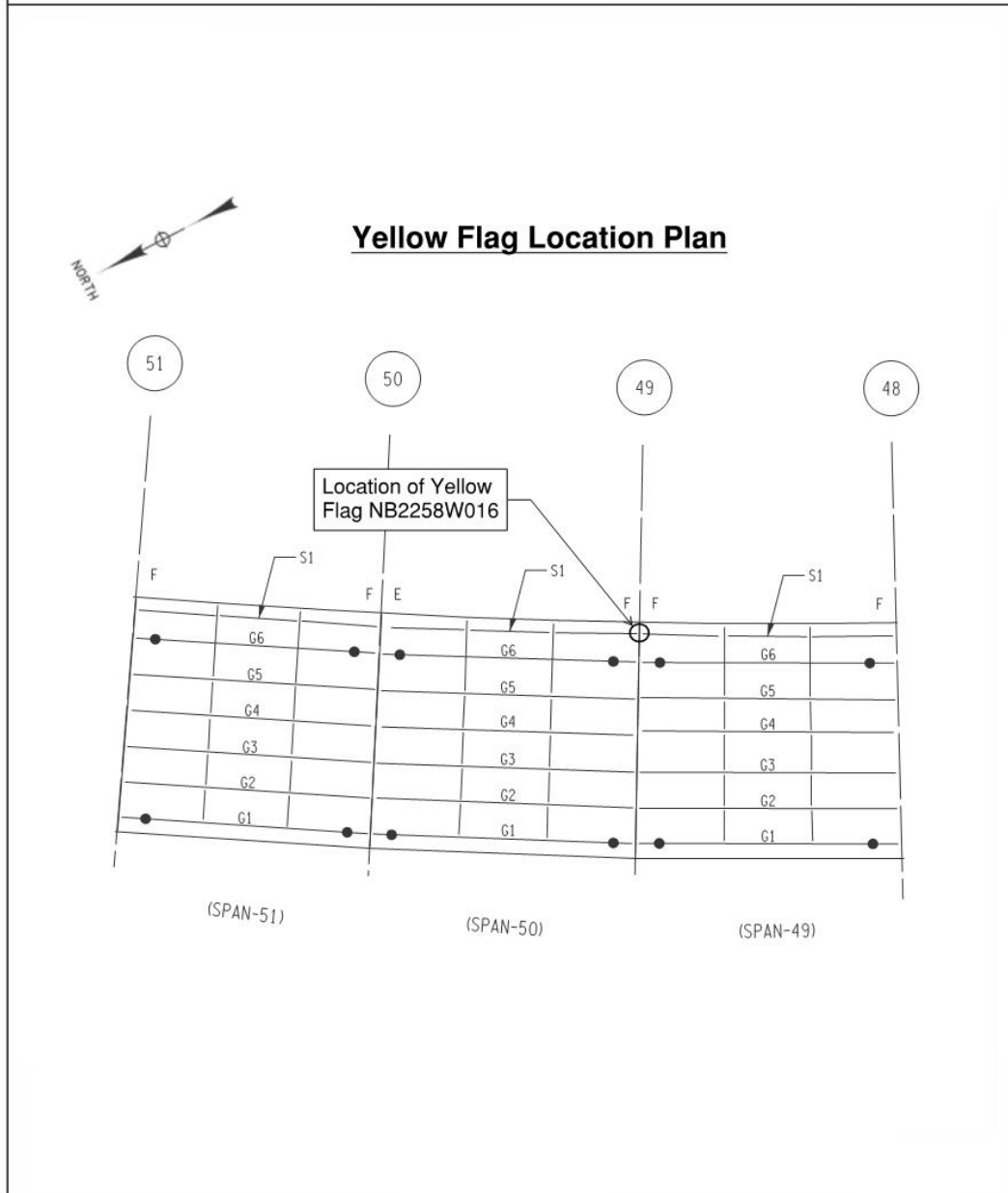
**Flag Photographs**Photo Number: **1**Photo Filename: **22\_Flag Location Plan.jpg**Gowanus Expressway  
2022 Biennial Inspection - Field SketchBIN: 1065318Team: AA/TSDate: 09/29/2022Span: 50Location: Stringer S1 at Pier 49**Attachment Description: Yellow Flag Location Plan**

Photo Number: 2

Photo Filename: 22\_Span 50\_Pier 49\_Stringer S1 Condition Sketch.

Gowanus Expressway  
2022 Biennial Inspection - Field Sketch

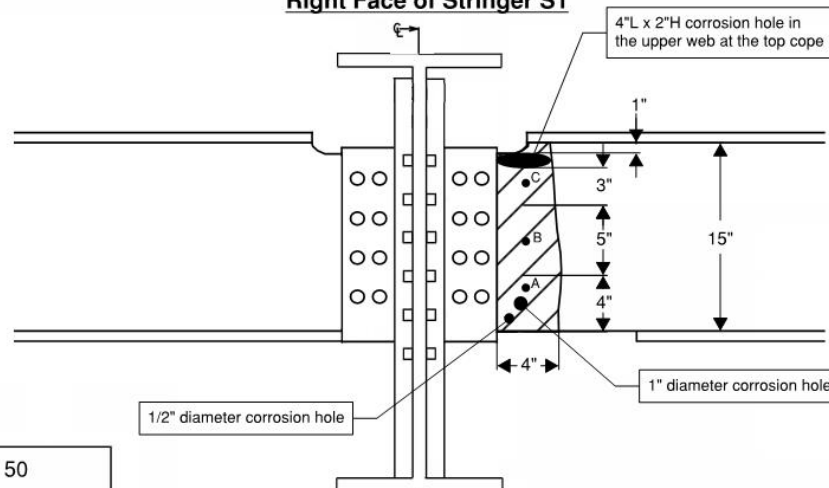
BIN: 1065318

Team: AA/TS

Date: 9/29/2022

Span: 50

Location: Stringer S1 at Pier 49

**Right Face of Stringer S1**

SPAN 50  
@ PIER 49  
S1

Point	D-Meter Readings (in)	Calculated Section Loss
A	0.13	68%
B	0.29	28%
C	0.2	50%

**Section loss Calculations:**

Original web thickness = 0.40" (measured in field)

Shear web area:

$$(0" \times 1/2") + (0" \times 1") + (0.13" \times (4" - 1.5")) + (0.29" \times 5") + (0.20" \times 3") + (0" \times 2") = 2.375 \text{ in}^2$$

Overall shear web area section loss:

$$[(14" \times 0.40") - 2.375 \text{ in}^2] / (14" \times 0.40") \times 100 = 58\% \text{ section loss}$$

**Notes:**

- The left side bottom flange of the stringer exhibits 25% section loss at the edge of the flange for 18"L x 2"W.
- The length of this portion of Stringer S1 between Pier 50 and TB1 is approximately 16ft.
- The distance from the edge of the roadway to the right fascia steel plate is approximately 26".
- The distance from the right face of the Stringer S1 web to the right fascia steel plate is approximately 25".

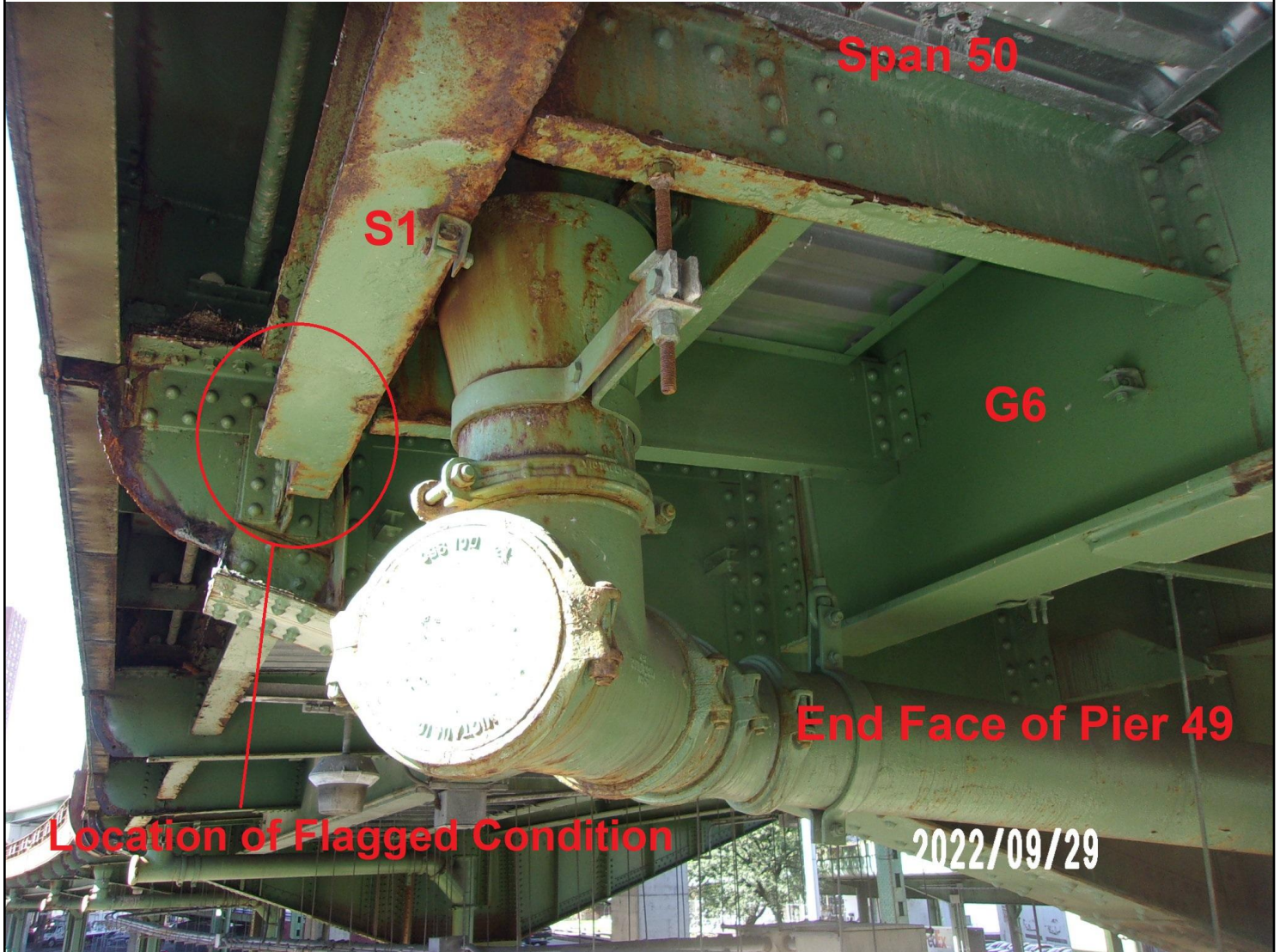
SCALE: N.T.S

wsp

**Attachment Description: Yellow Flag Condition Sketch**

Photo Number: 3

Photo Filename: 22\_113\_3664.JPG

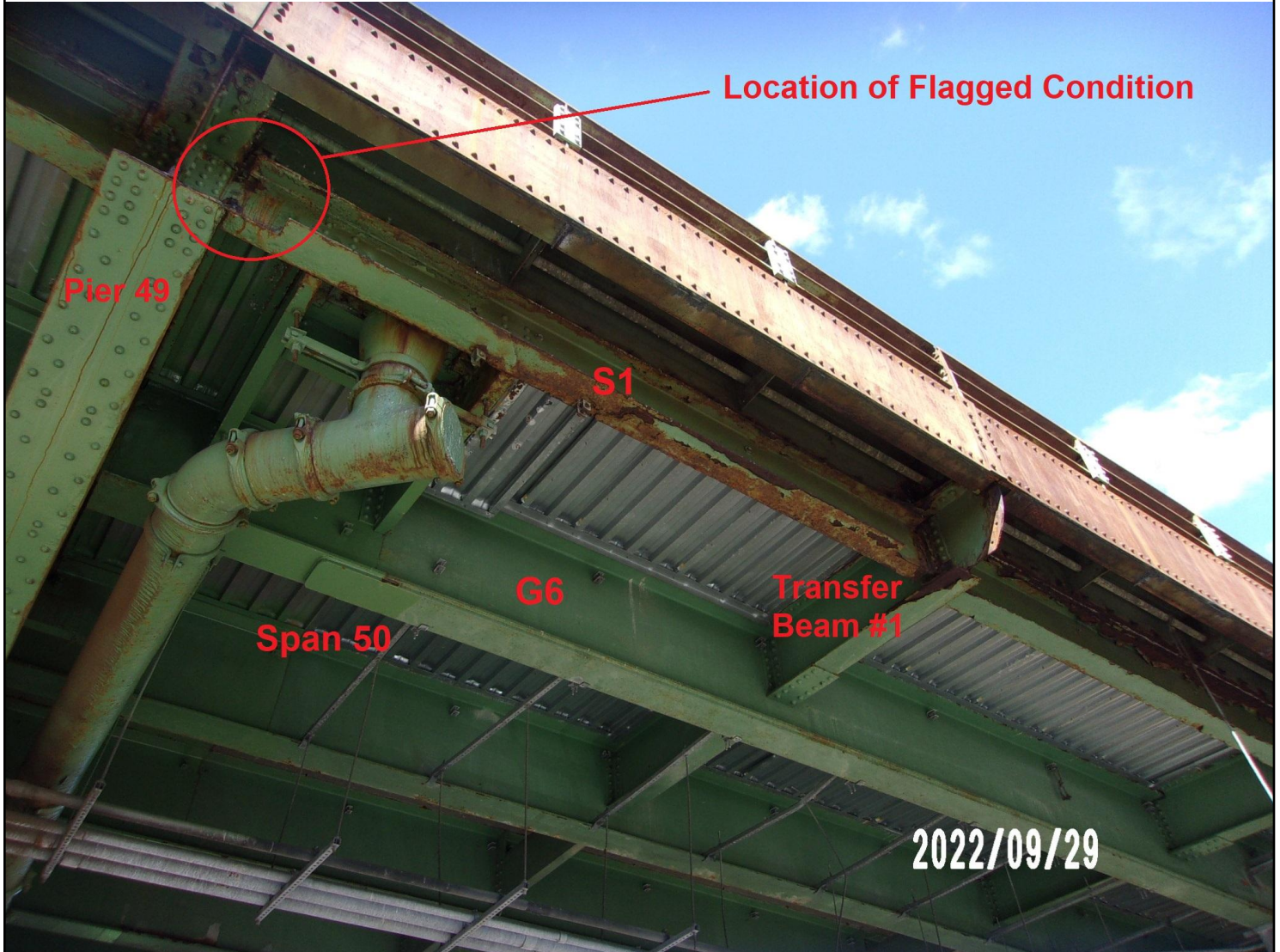


**Attachment Description:** General view of the flagged condition at Stringer S1 in Span 50 at Pier 49. Looking Begin.



Photo Number: 4

Photo Filename: 22\_113\_3693.JPG



**Attachment Description:** General view of the flagged condition at Stringer S1 in Span 50 at Pier 49. Looking Left.



Photo Number: 5

Photo Filename: 22\_113\_3674.JPG



**Attachment Description:** The right face of Stringer S1 in Span 50 at Pier 49. The end of the stringer exhibits overall shear web area section loss of 58% for the full height of the web along the connection angle with one corrosion hole in the upper web and two corrosion holes in the lower web. Looking Left.



Photo Number: 6

Photo Filename: 22\_113\_3652.JPG



**Attachment Description:** The right face of Stringer S1 in Span 50 at Pier 49. Close up view of the two corrosion holes for 1/2" diameter and 1" diameter in the lower web. Looking Left.



Photo Number: 7

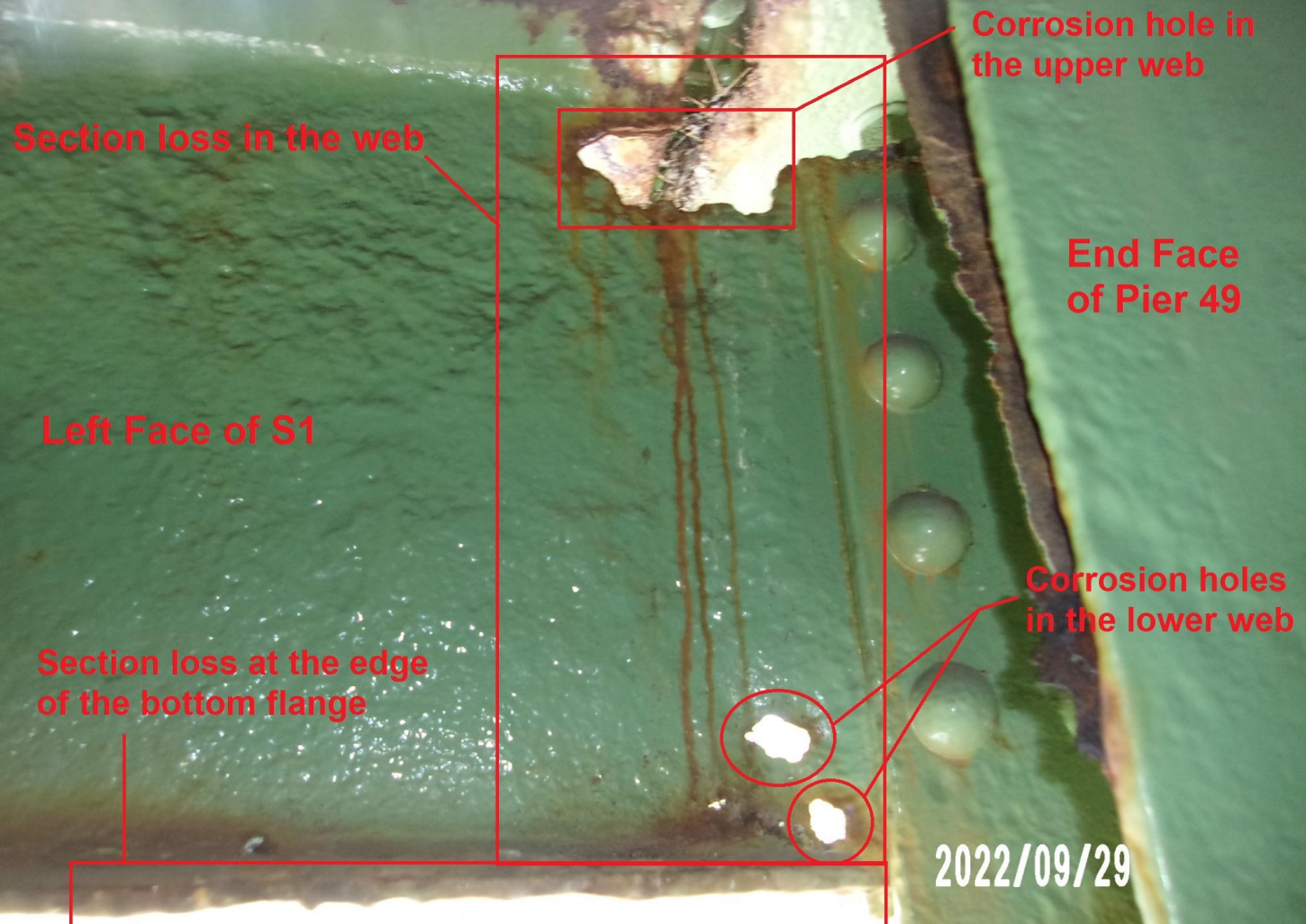
Photo Filename: 22\_113\_3653.JPG



**Attachment Description:** The right face of Stringer S1 in Span 50 at Pier 49. Close up view of the one corrosion hole for 4"L x 2"H in the upper web. Looking Left.



Photo Filename: **22\_113\_3659.JPG**



**Attachment Description:** The left face of Stringer S1 in Span 50 at Pier 49. The end of the stringer exhibits overall shear web area section loss of 58% for the full height of the web along the connection angle with one corrosion hole in the upper web and two corrosion holes in the lower web. Also, the edge of the bottom flange exhibits 25% section loss. Looking Right.



Photo Number: 9

Photo Filename: 22\_113\_3677.JPG

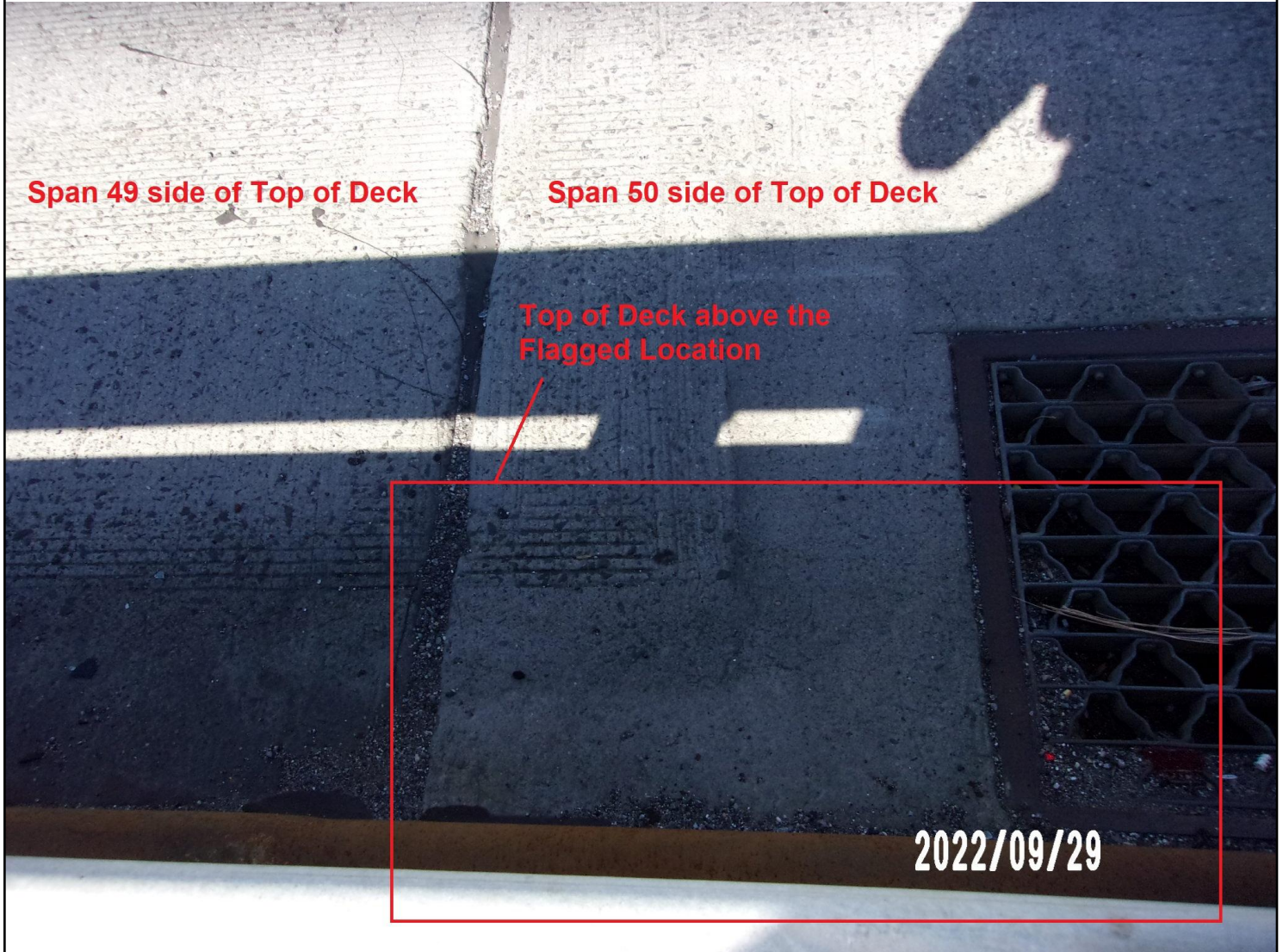


**Attachment Description:** The right face of Stringer S1 in Span 50 at Transfer Beam #1. The end of the stringer exhibits 1/8" section loss for the full web height along the connection angle with one corrosion hole in the upper web. Looking Left.



Photo Number: 10

Photo Filename: 22\_113\_3655.JPG



**Attachment Description:** The top of the deck above Stringer S1 in Span 50 at Pier 49. The top of the deck above the flagged condition exhibits no significant defects. Looking Left.